CMA Members @CMA_Members

Kingston doctors ring in new communications era
#futurepractice
Because you are committed to offering the best care possible.

Easy access to data | Facilitated decision-making | Better health outcomes

Having access to the relevant data at the point of care, when you need it, makes it easier to give your patients the care they deserve. Plus, with TELUS Health EMR, it’s simple to share confidential information securely with your broader healthcare team. It’s no wonder TELUS Health is the leading provider of electronic medical records (EMR) in Canada.

telushealth.com
More investment, more clinical value at the point of care

Major EMR funding programs face extinction ... and possible rebirth

Physicians role in e-health becoming more defined

Kingston, Ont.: We tweet here

e-Health 2013

Delivering the e-patient perspective

Topol lays out digital future of medicine

Why e-health competencies are essential

Making the case for patient portals
More investment, more clinical value at the point of care

Louis Hugo Francescutti

AS REPORT CARDS GO, THE ONE grading Canada’s recent progress in health information technology (HIT) adoption could be rated a solid C+ at best.

Three years ago, the Canadian Medical Association (CMA) called for a refocusing of investments in health IT (HIT) to target specific health issues in support of front line health care delivery. We felt this was needed for physicians, and the patients they care for, to accelerate the tangible benefits gained from spending on electronic medical records and other HIT advances. These translate into improved health care and enhanced efficiency in the health care system.

Recently, the CMA asked the provincial/territorial medical associations (PTMAs) to assess how their jurisdictions have done in three key areas: supporting physician adoption of EMRs; increasing the effective use of EMRs and HIT solutions; and accelerating health information exchange. The resulting grades ranged across the spectrum.

While the $200 million invested by the federal government over the last three years has led to an estimated 70% of practising physicians having an EMR by 2014, little has been done to adequately address the functional requirements of specialists or to support physicians who need to migrate patient data from one EMR system to another.

Similarly, while Canada Health Infoway has taken some steps to explore how best to leverage patient portals to support consumer health, little has been done to develop clinical support tools or advance natural language processing.

While significant progress has been made in the use of telehealth for clinical care, the same cannot be said for the development of solutions that will allow clinicians to share data at a local or regional level with colleagues, patients and regional management.

The CMA-initiated report strengthens our belief that continued focused spending is required to ensure we are deriving the maximum benefit from HIT advances.

In addition, we feel certain principles need to be respected to ensure that our digital future is on a sound footing.

These principles include the need for strong collaborative leadership between governments and professional groups, governance that respects both the individual and the profession, an open decision-making process, and ensuring clinicians play a significant role in the planning, design and implementation of health information systems.

When it comes to HIT adoption, engaging physicians early and often has always been our mantra. As Canada’s biggest EMR-funding programs go through fundamental transformations (see accompanying article) the need to involve clinicians in decision-making remains just as important — if not more so — than it was a decade ago, when these programs first began.

The CMA and its PTMA partners are developing a new road map as part of the CMA’s health care transformation initiative, so that with proper clinical guidance and investment we can build on the advances to date and address gaps that we have identified.

All of which we hope will lead to the next report card on our progress in HIT being one we can be proud to show off.
MAJOR EMR FUNDING PROGRAMS FACE EXTINCTION ... AND POSSIBLE REBIRTH

Pat Rich

YOU COULD CALL THEM DINOSAURS — mighty creatures that have ruled since the days when electronic medical records (EMR) were just emerging from the primeval swamps of the pre-technological world.

But, as with the dinosaurs, these early programs designed to encourage physician use of EMRs in Alberta, British Columbia and Ontario are now being phased out or transformed, signalling a shift in how EMR adoption is being tackled in this country.

“The changes we are seeing are part of the natural evolution of the digitization agenda in Canada,” said Bill Pascal, chief technology officer for the CMA. “In the early stages of EMR adoption the main aim was to capture patient encounter information at the point of care. We are now moving into the exchanging data and analyzing data stages.”

Pascal said this means the new primary focus is to harvest more clinical value from health information technology. Funding programs must shift to support physicians as they move along the clinical maturity curve in using EMRs, “and also by using analytical tools to provide more real-time feedback on their patients.”

Dr. Alan Brookstone, a BC family physician, founder of CanadianEMR.ca and expert commentator on EMR use in Canada, agrees.

“The funding programs are winding down and the large amounts of funding to purchase and implement technology are finite now,” Brookstone said. “I think where we will see more of the dollars being spent… will be in something that’s a bit softer, such as EMR optimization in practices and also in change management.”

Just as the Physician Office Support Program (POSP) in Alberta, OntarioMD in Ontario and the Physician Information Technology Office (PITO) in British Columbia undergo these changes, Canada Health Infoway — which has overseen hundreds of millions of dollars in EMR investments — is also facing its own potential mortality.

For practising physicians in Canada, these organizational and structural shifts signal the fact that with EMRs now used in most physician practices, governments in Canada’s biggest jurisdictions no longer want to pay doctors just to park a computer with EMR software on their desk. However, programs to support basic hardware and software costs...

“There’s no plan to end Infoway operations at this point in time.”
— Federal spokesperson
continue to exist in jurisdictions like New Brunswick, where EMR adoption is not as widespread.

While discussions are underway in Ontario, Alberta and British Columbia to ensure physicians continue to be provided with support for implementing and using EMRs, events of the last few months make it clear existing programs are changing — if not ceasing altogether.

On June 12, 2013, the Alberta government and the Alberta Medical Association (AMA) announced that as of March 31, 2014, EMR implementation support through POSP will end. This announcement was followed by another one clarifying that physicians would continue to be eligible for the maximum funding support of $35,000 to March 31, 2019.

As part of the new agreement between the AMA and government signed this spring, it was agreed the two parties would work to develop a new approach and an ongoing EMR implementation plan for Alberta physicians.

"An integrated and coordinated provincial EMR replacement strategy that meets the needs of patients, physicians and the health system is a critical component of our evolving health information system and a key enabler for many health system priorities and initiatives," the agreement stated.

The strategy — to be developed in partnership by the AMA, Alberta government and Alberta Health Services — will focus on community-based physician practices.

In BC, doctors faced a similar situation. It was announced in October 2012 that in the new master agreement between the provincial government and the British Columbia Medical Association the mandate and funding for PITO would only be extended to March 31, 2014.

In turn, PITO announced in April 2013 that it would no longer accept new applications for one-time funding toward EMR software and hardware beyond Sept. 30 of this year.

As one vendor stated online: "If you are considering the switch to our hosted EMR right now, if it’s something you are thinking about for the future, or even if it’s something you are not considering at all at this point, we strongly encourage you to apply for funding approval. If you don’t apply (in time) ... you could be missing out on over $12,000 of funding per physician toward the EMR software and any associated hardware that you might need."

There is currently no word on whether the work of PITO will extend beyond next March, and — if so — in what form.

The future of OntarioMD is also under discussion. Responding to a query about the status of the program, in July an OntarioMD spokesperson said the organization is "in negotiations" with eHealth Ontario about its role after March 31, 2014. "Once we have an agreement signed with eHealth Ontario and the Ministry of Health and Long-Term Care, we will be in a better position to comment on the future," the spokesperson said.

A source close to the discussion predicted OntarioMD will continue to have a role in helping physicians deal with change management and more effectively use EMRs.

Brookstone says one important implication of the changes in major funding programs will be the loss of ability to force certification standards on companies selling EMRs in those jurisdictions. He predicts there will be a shift to certification of messaging and interoperability, and that this might happen at the national level.

With no federal funding allocated in 2013, the future of Infoway is captured in this excerpt from an article that ran in the Halifax Chronicle-Herald last April:

"The vast majority of our funding has been allocated for approved projects," said Infoway spokesman Dan Strasbourg.

A spokesman for Health Minister Leona Aglukkaq said there is no plan to wind down Infoway’s operations. Steve Outhouse (spokesman for Aglukkaq) said the lack of funding was an austerity budget measure.

"There’s no plan to end Infoway operations at this point in time."

Its job for 2013 will be implementing projects already underway, he said. The department can’t guarantee funding Infoway in 2014 because that decision will be made in the lead-up to next year’s budget, Outhouse said.

Since its inception, the agency has received $2.1 billion in capitalization across 370 e-health projects.

In its last annual report, Infoway reported that 97% of that funding had been approved for projects as of March 31, 2012.

"Strasbourg said Infoway has enough cash to cover operating costs for "the foreseeable future." Despite the uncertainty, Infoway continues to map out plans for better use of technology to support the health care system. In June, the agency released Opportunities for Action: A Pan-Canadian Digital Health Strategic Plan. This document, based on consultations with 500 individuals and organizations, including clinicians, is intended "to move the Canadian digital health agenda forward by addressing the enablers that need to be in place and, building on cooperation, collaboration and data sharing, to produce better care and better health outcomes."

"To date, the focus has been on implementing provider-specific digital health solutions in physician offices, laboratories, hospitals and pharmacies, and ambulatory care, public health and diagnostic imaging clinics," the report said. "Now, the next logical step is to accelerate our effort in those areas that will improve the overall patient experience because they create better transitions through the system, foster better communication between patients and providers in all care settings, demonstrate the importance of quality by supporting continuous improvement, and create better value by supporting evidence-based care."
Physicians’ role in e-health becoming more defined

Pat Rich

THERE ARE STRONG SIGNALS THAT Canadian regulatory authorities are starting to see competence in using health information technology (HIT) as an integral part of modern physician practice. While these steps stop short of making use of HIT the standard of care, they indicate a definite move in this direction.

The Royal College of Physicians and Surgeons of Canada recently announced that serious consideration is being given to integrating e-health into the new CanMEDS framework to be unveiled in 2015. Similarly, the College of Physicians and Surgeons of Ontario (CPSO) has recently released a position statement* on e-health stating “… the College sees a future where e-health connectivity will be required for physicians to practise effectively.”

In its July newsletter, the Royal College noted that it has formed an e-health expert working group to make recommendations about how e-health should be integrated into CanMEDS. The college has also called for member input on the working group’s deliberations. “Integrating e-health into CanMEDS would be groundbreaking,” said working group member Dr. Kendall Ho in the newsletter. “Medical schools are beginning to embed e-health in their training programs but it hasn’t been done consistently in postgraduate medical education or along the educational continuum of medical training. We’re excited because we would be among the first in the world to do this.”

Ho added “we owe it to our patients and to our society to join forces with them in technology-enabled enhancement of clinical care, and there is no better time to do this than now.”

The Royal College anticipates a full 2015 CanMEDS draft framework will be available for review at the end of 2014. The college is inviting its Fellows to sign up for an e-panel on e-health and provide input at www.royalcollege.ca/canmeds2015/consultations.

The CPSO released its statement on e-health after seeking input on the draft document through an online consultation process. “It is the College’s hope and expectation that in time, a statement about e-health will be unnecessary, as (it) will become an integral part of the practice of medicine,” the statement concludes, having noted earlier that “the vast majority of physicians will adopt e-health technologies that enable them to provide better, more efficient care to patients.”

While acknowledging that the roles outlined for physicians are not new, the statement specifies some areas where the physician should meet evolving standards. These include:

- adapting to the changing e-health environment by committing to lifelong e-health learning
- demonstrating e-health literacy by proficiently using relevant e-health tools and technologies to facilitate best practice
- using e-health for the benefit of patients, individually and collectively, where appropriate, in a way that ensures patient confidentiality, protects the doctor–patient relationship and maintains public trust in the profession — guiding patients, families and colleagues to high-quality e-health resources, wherever possible

“We owe it to our patients and to our society to join forces with them in technology-enabled enhancement of clinical care and there is no better time to do this than now.”

— Dr. Kendall Ho

*The CPSO statement can be accessed at: www.cpso.on.ca/policies/positions/default.aspx?id=7870
Kingston, Ont.

WE

TWEET

HERE

Pat Rich
“Live in Kingston. You kinda HAVE to know the Hip if you live here,” was the reply I received from Dr. Moira Browne (then just using her personal account, @MoiraBrowne). While Browne’s profile identified her as a physician (also @drmoirabrowne) I didn’t realize then that I was dealing with an epic Twitter user who has now racked up more than 93,000 tweets on her personal account.

A month later, having been made aware of the active social media interests of Dr. Anne Ellis (@DrAnneEllis), associate professor in the department of medicine at Queen’s University and director of the allergy research unit of Kingston General Hospital, I contacted her about her plans to attend an upcoming annual meeting in the United States focusing on allergy and asthma topics.

“Be sure to tweet the interesting new study findings from #AAAAI (the American Academy for Asthma, Allergy and Immunology),” I tweeted on Feb. 22, to which she replied “Will do!”

It was also around this time that I interviewed Dr. Chris Simpson (@Dr_ChrisSimpson), a Kingston cardiologist and now president-elect designate of the Canadian Medical Association, about his use of Twitter in the election campaign for that CMA position (see Blogging and tweeting to voters: Social media and the CMA presidency in the March 2013 edition of Future Practice).

These encounters — happening for different reasons, but not unlike many other connections made on Twitter — raised awareness that Kingston had a vibrant community of doctors using Twitter for various purposes. Over the coming months more connections with other Kingston-based physicians and medical students were made.

Recently, I had travelled to Kingston to interview several of my contacts about why they were using Twitter and what they received from it. Based on those discussions and others via email, it became clear that these medical professionals saw the social channel as a valuable tool for connectivity, ongoing medical education and professional enrichment.

Those interviewed took many different routes to come to Twitter.

Browne started in 2009 to follow the podcasts of a friend, then became involved with a group who were fans of the television series ‘Lost.’ “It just sort of expanded,” Browne says about her 93,000+ tweets.

“I used Twitter only to check on traffic updates in Kingston,” wrote Dr. Michelle Gibson, assistant professor of geriatric medicine and a director of undergraduate medical education at Queen’s. “One day, the Kingston traffic guy had retweeted something that Anne Ellis had done. I started following her, and then Bob (Connelly), and then Moira (Browne), and others. Bob and Eve Purdy (one of our superstar students and very social media-savvy) had an interaction one night about the #MedEd chat, and I discovered that hashtag, and I was firmly hooked.”

Pediatrician Dr. Richard van Wylick (@rvanwylick), director of the cystic fibrosis clinic at Queen’s, took a measured approach to Twitter. After joining in late 2011, he says he spent the first year just lurking and watching what other people posted before posting anything himself.

Dr. Mike Leveridge (@_TheUrologist_), a urologist and assistant professor of urology and oncology at Queen’s, had used Facebook for years but joined Twitter because he saw it had potential as “a whole untapped resource for academic purposes.” He notes he chose his Twitter name to appear professional, but now regrets he did not use a more regular identifier such as ‘DrLeveridge’.

Colleague and fellow urologist Dr. Darren Beiko (@beikoMD) joined Twitter to support Leveridge in assessing its academic and research potential, but for him it was more of a challenge.

“I had no idea what I was getting myself into — my social media experience before this was basically nil,” he said. “I remember vividly the first week in January I spent two nights with my daughter, who understands this stuff and who set up my account, spending 3–4 hours each night wasting time, trying to figure it out. I had no real understanding of the hashtags and all this stuff.”

Ellis writes: “I head up a very unique research facility at Kingston General Hospital/Queen’s and my predecessor who developed the facility passed away in 2011, and we wanted to ensure ‘the world’ was aware that the EEU (Environmental Exposure Unit) was going strong and under new leadership.

“I found that I have an inventory of all the medical/political knowledge I needed all in one place. I can find out exactly what is going on in medicine.”

— Dr. Chris Simpson
“So I opened up … my Twitter account. I initially thought this would be managed by someone else for me, as I was convinced it would be too time-consuming. I quickly learned otherwise and couldn’t get over how much I was learning from colleagues and researchers around the world. It soon became my new CME.”

Simpson says when he decided to run as president-elect of the CMA, he began to use Twitter regularly. He says he used his account “to define myself to the community. I wanted to establish myself as ‘a pragmatic progressive’ and I knew that was a way to get the message out.”

With the election over, Simpson continues to use Twitter because “it’s a great learning tool.” By following select individuals and organizations in Canada, the US and Europe, he says “I found that I have an inventory of all the medical/political knowledge I needed all in one place. So every morning I can find out exactly what is going on in medicine. The great thing is you get a synopsis and you can dive in and go as deep as you want to go with a topic.”

As a medical student going into second year, Matthew Church (@matthewchurch) has always experimented with new forms of social media as they emerge. While he had used Twitter in the past to follow many individuals who interested him, on entry to medical school Church said his use has become more focused on medicine.

Twitter provides him with a “direct line” to many of the physician teachers he respects, as well as allowing him to gain insights into what they are working on. The topic of Twitter as a new communication channel between teachers and students was raised by the other doctors involved with Queen’s University.

van Wylick explains that he uses Twitter as a “value-add” for the students who follow him, in order to give them additional information about the subjects he is teaching. Church says providing this type of insider information to students “shouldn’t be insider knowledge at all. It’s just ... hard for these people (teachers) to disseminate the information by inundating email boxes.”

Leveridge and Simpson note that Twitter has led to a “democratization” of the classroom, with teachers and students engaging in debates that wouldn’t otherwise be happening. “For those of us who have the philosophy that we want to graduate docs who are better than we are, Twitter is a great thing,” Simpson states.

Leveridge speculates that while medical students who are not using Twitter may be missing out on this enhanced teaching environment, he doubts there are many students not fully engaged with social media. “I’ll be using Twitter, judiciously, with teaching in the next year for sure,” says Gibson, who noted that using Twitter with her second-year students was “a huge hit.”

Enhancing connectivity is also the key benefit that family physician Browne derives from using Twitter professionally. “I find it a really collaborative medium,” she says.

Browne also talks about the value-add element of Twitter by referring to a recent situation in which she was able to arrange a consult for a pediatric patient of hers through that social medium. Having posted a general statement about the patient, she received a direct message from a specialist who was able to deal with the case. “I went, ‘Seriously?’ This is amazing. I wouldn’t have even thought to ask.”

Overall, Browne says “I feel I am more twigged in about what’s available in the community. And that wouldn’t have happened without Twitter.”

Browne, and most others interviewed, said they use Twitter heavily to keep current on information relevant to both their own area of medicine and other specialties. Getting and sharing information from medical conferences is another area where those interviewed are finding value with Twitter.

“I live-tweeted from CCME (the Canadian Conference on Medical Education) and it was a transformative experience for me — a term I don’t use lightly,” notes Gibson. “I’m using it in the education sense. I am definitely an introvert, and it’s much easier for me to connect online first than to just approach someone I want to meet at a conference. Also, I realized I got much more out of sessions if I live-tweeted them than if I just sat there — I am prone to my attention drifting, so live-tweeting helps me attend.”
van Wylick says Twitter has provided him with a new “lens” on conference proceedings and helps him decide which sessions to attend. He says he also tweets from conferences on items he finds of particular interest.

Leveridge said while it has been said Twitter might hasten the demise of the traditional medical conference, since people may not feel obliged to attend in person, in urology meetings the volume of tweets has grown immensely in recent years. For example, he said, while there were just 750 total tweets using the official hashtag of the American Urological Association’s annual meeting in 2012, this grew to 5,900 tweets at this year’s gathering.

Our experts reported no significant problems with patients who choose to follow them, and all acknowledged that because of the nature of the Twitter channel they have to be aware that patients or members of the public might view their comments. Leveridge spoke for most of those interviewed when he said he dealt with this by acting professionally at all times.

“If you’re a professional of any kind and you are on Twitter, you have to assume that all of your professional contacts and your personal contacts will read it,” says Browne.

“I don’t feel I’m at risk for tweeting something that is personal, risky or dangerous — if it is an opinion, it’s an opinion I am willing to stick with,” Leveridge maintains.

Because of his Twitter name, Leveridge admits he does get personal health questions concerning urology from people he doesn’t know but says he just ignores these.

However, Leveridge also notes that Twitter and other forms of social media are making medicine more democratic and allowing more interaction between physicians and members of the public. He referenced the hashtag #bcsm as “the standard-bearer of democratization” where world experts on breast cancer and surgical oncology regularly interact with patients at different stages of breast cancer to discuss issues concerning the disease.

Beiko points out that while guidelines currently exist for how physicians act professionally “times are changing quickly. By 2017, patients and their health care providers are going to be communicating very differently.” As an example, Leveridge noted that young parents want to engage with their pediatrician or find pediatric advice through social media. He referenced Quinte Pediatrics and Adolescent Medicine (@QuintePediatric), just down the road in Belleville, which is using innovative social media approaches to provide information to patients.

All but two of the doctors interviewed use just one Twitter account. “There is only one me,” is how van Wylick puts it.

But Ellis has long had two accounts, because “within a short period of time on Twitter I noted the temptation to make personal observations and comments, but I felt quite strongly that my ‘Dr. Anne Ellis’ account should not be utilized to rave about restaurant food or complain about the airlines — that’s not why patients with allergies follow me (I don’t think, anyway) and certainly my research colleagues in the UK probably don’t care about how good the spring rolls are at Chez Piggy. Some of my followers follow both accounts anyway, but I make it clear that if you want to learn something follow the professional account. The personal account is literally ‘just for fun.’ I’m always cognizant though that the MD degree doesn’t come off the wall just because my feet are up on the couch and still try to keep my musings and observations/comments along the lines that I wouldn’t be embarrassed to find out that my boss or the CEO of the hospital had been reading.”

After extensive tweeting with one account, Browne created her professional account to stop anyone else from coming along and taking that name. Now she uses her professional account for physician-related activities and following professional sources while reserving her personal account for other tweets.

Just why Kingston has so many physicians who have found Twitter valuable remains a mystery (it is also a city where the CEO of Kingston General Hospital Leslee Thompson (Leslee_KGH) is also an active tweeter). But their comments make it clear the tool deserves a hard look from physicians who have not yet chosen to dip their toe into the waters of social media.

“I feel I am more twigged in about what’s available in the community. And that wouldn’t have happened without Twitter.”

— Dr. Moira Browne

Dr. Richard van Wylick (@rvanwylick)
STAY INFORMED

Download the CMAJ app to browse articles as they are released

- Articles available to download for offline access
- SmartTabs for efficient navigation
- Included with CMA membership and CMAJ subscription
- Download the app directly to your iPad, iPhone or iPod touch

Learn more

cmaj.ca/cmajmobile
Delivering the e-patient perspective...with style

Pat Rich

SPEAKERS AT E-HEALTH, CANADA’S annual showcase for the use of health information technology (HIT), are often informative, engaging and even infuriating. But they are rarely as endearing as double-lung transplant recipient Hélène Campbell, who captivated the audience at this year’s conference in Ottawa.

Co-sponsored by Canada Health Infoway, the Canadian Institute for Health Information and COACH, Canada’s Health Informatics Association, the meeting provides HIT stakeholders with a platform to profile innovative projects and products designed to improve health care delivery through the use of information technology.

This year, conference organizers acknowledged the growing role of the patient or health consumer in the e-health field. It was while on the panel to discuss this specific topic that Campbell was given an opportunity to demonstrate the ‘Hélène Effect’ — using her own personality and experience in social media channels to dramatically raise awareness of organ and tissue donation.

“I’m speaking quickly because I can now,” Campbell said.

Campbell shared the podium with co-panelists Dr. Joseph Cafazzo, lead at the Centre for Global eHealth Innovation in Toronto, and Dr. Mike Evans, a Toronto family physician who helped create arguably some of the most successful YouTube videos ever dealing with public health issues.

But as she darted back and forth across the stage, it was Ottawa’s Campbell who stole the show. Her story about contacting pop star Justin Bieber through Twitter and enrolling him in her campaign to encourage organ donation is no longer new. But it clearly demonstrates the power of social media when used effectively in health advocacy.

Cafazzo and Evans, though largely relegated to backup roles by Campbell, also had strong messages about involving patients in their own health care — especially in an electronic environment.

“We are missing out on the biggest workforce in health care — patients. We need to tap into this,” said Evans. He noted that for the younger generation, the electronic environment is one they’ve been brought up in and are comfortable with.

Cafazzo said when it comes to using mobile technology for self-care in chronic disease management, the potential for patient involvement is particularly high. “There is no point in building technologies that have no impact on patient outcomes,” he said, commenting on medical apps.

While the panel discussion served to focus attention on the patients’ role and that of the public in e-health, several other sessions also touched on this theme — especially those that highlighted new examples of patient portals or other tools that allow patients to manage their own health information.

In addition to the patient focus, physicians were also heartened by the strong medical presence at this year’s conference featuring many Canadian physician leaders in the HIT field such as Drs. Ed Brown, Darren Larsen and Kendall Ho.
TOPOL LAYS OUT
DIGITAL FUTURE
OF MEDICINE

Pat Rich
Cool gadgets
(as shown by Topol)

- a wearable headband that can monitor brainwaves on a minute-by-minute basis and give information on the quantity and quality of sleep
- a smartphone with an attachment that functions as a glucometer, available in the Apple Store
- a smartphone that provides cardiogram readings
- an oximetry and heart rate app for the mobile phone
- a mobile phone that monitors all vital signs, measured through a wristband
- a tool that digitizes voice to assess depression or Parkinson’s symptoms
- a mobile phone that can deliver liver and thyroid function tests
- a device to digitally monitor medication adherence
- a hand-held ultrasound device that can give images of the heart and function as a stethoscope
- a reusable $2 add-on device to measure refraction and assess vision
- a hand-held genomic sequencing device

MEDICINE’S BRIGHT, SHINY
digital future was front and
centre during the opening
keynote e-Health 2013 address
by Dr. Eric Topol.

Echoing a presentation he gave at the Health
Information Management Systems Society
annual meeting in New Orleans a couple
of months earlier, Topol proved to be an
entertaining and provocative speaker.

As a cardiologist, professor of genomics
and chair of innovative medicine at the
Scripps Research Institute, La Jolla, Calif.,
Topol has acquired a reputation as a
visionary speaker in outlining the potential
d for digital medicine.

The substance of Topol’s presentation
could be categorized into two main themes:
promoting innovative ideas and the
demonstration of cool gadgets.

Promoting innovative Ideas

He started by asking how many
audience members were active on Twitter,
and was critical when few indicated
they were. “That’s where I get my best
information,” he said.

Topol described the practice of medicine
today as “dumbed-down medicine” and
said it was not sufficient for health care
providers to just be connected with
patients. He said they must also encourage
patients to become involved in their own
care.

Canadian content in Topol’s presentation
took the form of singling out this country
as an example of how social media can
cause bad science — as well as good —
to proliferate, demonstrated here by the
promotion of CCSVI (chronic cerebrospinal
venous insufficiency) as a suspected cause
of multiple sclerosis.

Among the ideas expressed by
Topol were the following:

- Online patient communities, such as
  www.patientlikeme.com, are convincing
  patients to trust their online peers more
  than their own physicians for medical
  information.

- Personalized medicine will allow doctors
to use ‘big data’ to select information that
would be of value to individual patients.

- All patients will eventually have access to
computerized tools such as IBM’s Watson
to aid in diagnosis and management, but
these will not replace the physician.

- A lot of health care delivery is stuck in
a 1960s model of population health
when it comes to thinking about routine
screening and use of prophylactic
medication, because “we essentially do
the same thing for all people ... (but)
now we have the ability to digitize human
beings and we can make a Google Map of
each individual.”

- Hospitals are still high-risk environments
where nosocomial infections and medical
errors continue to occur, so home
monitoring should be validated and
encouraged, when appropriate.

- We can now use genome sequencing to
personalize treatment and target specific
cancer therapies.

- “What we need is massive, open, online
medicine (MOOM).”

- Give people the ability to have their
genome sequenced and access to all their
genomic information.

- Patients must have access to their own
medical record including notes, lab results
and data from implantable cardioverter
defibrillators.

- Doctors should be teaching guidance,
knowledge, empathy and communication.

- Patients must be told how much radiation
they are getting from medical imaging
and scanning.
Why e-health competencies are essential: THE NEXT GENERATION

Steve Hawrylyshyn and Naheed Dosani

AS RESIDENT PHYSICIANS, OUR environments change constantly as we learn and work in a wide variety of medical specialties. One commonality, regardless of the clinical area we work in, is the interaction we have with the many technologies that help coordinate the provision of patient care in our health care system.

For example, while many trainees know the frustrations associated with the use of electronic medical records (EMRs), few receive even basic training on these complex systems. Therefore, we believe there is great value in being given an opportunity to learn more about the intersection of technology, health care and health informatics. This was confirmed while we were attending and speaking at the e-Health 2013 conference in May.

Well-known American cardiologist, geneticist, researcher and editor-in-chief of Medscape Dr. Eric Topol opened the event by challenging the audience to envision a technological revolution in health care, one led by personalized, portable medicine. Examples included modified smartphones able to perform sleep studies and smartphone-enabled ECG readers able to provide results from the comfort of a patient’s home in a more effective, cost-efficient manner.

New technologies such as these have the potential to drastically change the landscape of our health care system in years to come.

Transitioning to practice can be a challenging time for new physicians. The conference was a useful venue to learn about new and existing technologies, adoption patterns and associated costs for establishing the infrastructure needed to support various types of clinical practice. Several of the vendors offering similar products were on hand to answer questions — enabling direct comparison, interactive demonstrations and further queries. There were also presentations from regulatory oversight organizations like eHealth Ontario that gave updates on the future landscape of health technologies (e.g., new EMR systems) to help physicians adopt meaningful progressive technologies.

While many physicians understand what is required to keep up with the evidence and literature related to clinical medicine, competency within health informatics can be demanding. We learned of a growing national movement to include e-health as part of formal medical curricula, and were encouraged to see that e-health literacy is being considered for a new content area in the revised 2015 CanMEDS framework.

While some basic e-health literacy should be covered in medical training, our experiences at e-Health 2013 helped to solidify current best practices with real-world examples. Concurrent sessions — like that led by Dr. Joseph Cafazzo, lead for the University Health Network’s Centre for Global eHealth Innovation, Toronto, on remote monitoring of blood sugar in diabetic pregnant women — illustrated the challenges, costs and changes in current practice seen with new mobile health technology platforms.

Encouraging the next generation of medical trainees to learn about the important role of health information technologies will help to promote innovation and new developments. These, in turn, could improve patient care at the population level and decrease long-term health care costs.

For example, teaching medical students and resident physicians how to better track chronic diseases via EMRs, or how to interact with patients via electronic patient health records, can potentially improve targeted care delivery and eventually, lead to better patient outcomes.

Medical trainees offer a unique perspective as they work in various roles and disciplines, a view that is often crucial to being able to see the “big picture”.

While many of the conference discussions centered on the strategic vision of new technology implementation across Canada, we hope the next generation will be invited to become involved in these discussions. Without a doubt, e-health literacy will be a vital competency for health care professionals in future, and only by encouraging young physicians to actively participate in the development and implementation of these new technologies will we realize their maximum potential.

Dr. Steve Hawrylyshyn is a family medicine resident at St. Michael’s Hospital in Toronto.

Dr. Naheed Dosani is a palliative medicine fellow and family physician with the University of Toronto.
HEALTH LITERACY IS A MAJOR CONCERN IN NORTH AMERICA. A lack of health literacy correlates with increased mortality among patients with chronic diseases such as cancer, diabetes and hypertension.

Improving health literacy means making health information available to patients in a convenient, personalized and easy-to-understand way.

One way to do this is through the use of patient portals by family physicians. This can be a direct and convenient way for doctors and patients to communicate. Portals and websites with varying degrees of functionality are currently being tested across Canada (see Future Practice, June 2013). How would such a portal work?
Ideally, each patient would have a password-protected profile that would allow personal access to individual health information such as:

- list of medications/dosages and any side-effects
- upcoming appointments
- emergency procedures
- indications to see a physician
- location of nearby pharmacies/labs
- online appointment booking options
- specific resources for chronic conditions
- explanation of drug routines
- lifestyle tips
- advice from the doctor
- links to health resources
- significant information the doctor has noted during appointments

A physician could record information during the patient interview and post select bits to the patient’s profile, thus reducing the impact of patients forgetting information and enabling the patient to review instructions online at any time.

A good patient portal will have straightforward website layout and functionality, making it intuitive and easy to use. The main page should have general information about the practice, information about chronic diseases, general health information and links to doctor-approved resources, as well as login access to the patient profile and ability to book appointments online. Many patients with chronic conditions already learn and communicate online, but a website containing links and information specific to the patient’s needs is more useful and convenient and would not overwhelm the user with unnecessary information.

Once patients have logged in, they would have access to specific information their physician has released to them, including helpful resources, video tutorials or a summary of their future action plan. Patients often leave the physician’s office wondering what their doctor was thinking or wanted them to do and worried that they didn’t fully understand the instructions given. Their ability to access a personal health profile provides a concrete, convenient resource that can help reduce fears and increase knowledge transfer from physician to patient.

The portal would create an environment where vital details are not lost. Patients would feel closer to their physician and would be as well informed about their own health as they deserve to be. Ideally, patients would also use this website to make notes, to better share their health history with new physicians and specialists. This is particularly important for patients with chronic illnesses, who are often seeing a number of specialists, have complicated medical histories and are taking several medications.

The open communication encouraged by patient portals could also positively impact the patient’s support system, particularly for those patients whose family or caregivers need to know what transpires in the doctor’s office but are unable to attend appointments. With the patient’s explicit permission, those involved in that patient’s care could review online any recommended resources or intervention instructions. This could dramatically improve health literacy among vulnerable groups, such as elderly and immigrant populations who often require others to be involved in their health care.

It is often difficult for some patients to comfortably initiate a conversation with their doctor about all of their medical issues. The online appointment booking function on a patient portal might address this key reason why patients don’t see their doctor as often as recommended. When patients can specify the reason for visiting, this would allow the physician to prepare for the visit — making patients feel more comfortable and supported.

Despite the benefits, there are a few obvious obstacles for patient portals. One is the large investment required to integrate the technology into physician practices. Having a hosted solution with easy-to-adapt templates would make a portal relatively easy and inexpensive.

Another significant roadblock is privacy. Each patient would need to consent to putting his or her personal health information online. And while the information would be kept secure via an encrypted password system, there is always potential for an information leak.

There is no doubt that use of a patient portal poses some challenges for the traditional family practice — but the potential gain for both patient and physician is tremendous. This kind of portal would go a long way toward giving patients a convenient, more central role in controlling personal health and creating a closer physician–patient relationship that can breed better communication in a health-literate environment.

Cody Jackson is a medical student at the University of Ottawa.
Provide **LEADERSHIP TRAINING** on-site at your organization

**PMI in-house leadership program**

Build leadership capacity within your organization, improve effectiveness of your team, address common issues and gain new insights. The PMI in-house leadership program is:

- customized for interdisciplinary health care teams
- provided in a highly interactive learning environment
- cost-effective and convenient — offered when and where you need it

Learn more

cma.ca/pmi-in-house
Are you taking full advantage of your CMA MEMBERSHIP?

Save time and money with a suite of world-class tools and resources

- provide superior patient care through access to point-of-care tools including DynaMed and Lexicomp Online
- stay informed with medical knowledge that matters through CMAJ, now available as a mobile app
- continue your learning journey with hundreds of online accredited CME options
- build your leadership skills through our PMI leadership courses and our new Coaching Connections service

Learn more

cma.ca/resources